

**FLEXURAL STRENGTH
OF
CONCRETE
(Using Simple Beam with Third-Point Loading)
AASHTO T 97**

APPARATUS

- Testing machine has a verification of calibration within the last 12 months
- 0.004 in. and 0.015 in. leaf-type feeler gauges

PROCEDURE

- Test specimen turned on its side with respect to its position as molded and centered on bearing blocks
- Load-applying blocks brought in contact with surface of specimen at the third points between supports and a load of between 3% and 6% of estimated ultimate load applied
- Gaps between specimen and load-applying blocks measured with feeler gauges
- No gap greater than 0.004 in. for a 1 in. length exists between load applying blocks and support blocks and the specimen
- If excessive gap exists, the specimen contact surface is ground or capped, or leather strips are used for shims
- Leather shims only used when specimen surfaces in contact with blocks or supports does not exceed 0.015 in.
- Leather shims, when used, are a uniform 0.25 in. thickness, 1 to 2 in. in width, and extend across the full width of specimen
- Hand wheel rotated clockwise and pen kept within spiral loading track
- If fracture occurs outside the middle third of beam the test result is discarded
- After test, three measurements (one at each edge and one at the center) taken at one of the fractured faces to the nearest 0.05 in. to determine average width, average depth, and line of fracture. Width and depth measurements are made on beam in testing machine
- Modulus of rupture of specimen determined by multiplying the maximum applied load indicated by test machine in lbf by the factor determined from the testing machine table to nearest 5 psi

 Acceptance Technician

 INDOT

 Date

 Comments _____

